

THE INVENTION CLAIMED IS

1. In a device for collecting airborne target samples for analysis, the improvement comprising:
a quantity of crushed reactive aerogel adsorbate.
2. The improvement of Claim 1, wherein said aerogel adsorbate includes chemically specific adsorbing chemistries for adsorbing specific target compounds.
3. The improvement of Claim 1, wherein said aerogel adsorbate includes glass fibers.
4. The improvement of Claim 3, wherein said glass fibers are of a 1-0.2 μ m size.
5. The improvement of Claim 1, wherein said aerogel adsorbate is impregnated with a metal.
6. The improvement of Claim 1, wherein said aerogel adsorbate has a surface area ranging from about 300m²/g to about 1100 m²/g.
7. The improvement of Claim 1, wherein said aerogel adsorbate has a density in the range of about 0.003 g/cm³ to about 0.7 g/cm³.
8. The improvement of Claim 1, wherein said aerogel adsorbate is composed of crushed aerogel selected from the group consisting of chemically treated silica aerogels, untreated inorganic aerogels, metal impregnated silica aerogels, metal oxide-silica aerogels, and pure metal oxide aerogels.
9. The improvement of Claim 1, wherein said crushed reactive aerogel adsorbate is contained in an open ended container, whereby airborne target material can flow through the containers for adsorption of target samples by the aerogel adsorbate.
10. The improvement of Claim 10, wherein said open ended container is

absorbate, is carried out by selecting an aerogel absorbate from the group consisting of aerogels having chemically specific absorbing chemistries, and aerogels treated or impregnated with material for adsorbing specific target compounds.

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